

**REMARKS**

Claim 16 has been amended. Claims 1-21 are presently pending.

Reconsideration and re-examination of the application as amended is respectfully requested.

### Rejections

#### 35 USC § 102

Claims 1-4, 7, 8, 12, 13, 17, 18 and 19 stand rejected under 35 U.S.C. 102(b) as being anticipated by Hettes et al (USPN 5,951,389). Applicants respectfully request that this rejection be withdrawn.

Claim 1 requires a fastener press fitted to a backing plate to define a central aperture. Notwithstanding the statements in the Office Action, Applicants submit that Hettes does not disclose or suggest a fastener press fitted to a backing plate to define a central aperture. Instead, Hettes discloses a fastener 306 integrally molded to the backing plate 304 (e.g., FIG. 10 and supporting description, column 7, lines 43-53). During an interview on April 23, 2003, the Examiner stated that Hettes references also discloses a press fit fastener at column 5, lines 50-51, which states:

The mount 306 is preferably formed integral with the backing plate 304.

**However, it is also contemplated that the mount 306 can be a separate component that is attached to the backing plate 304.**

(emphasis added)

It is unclear to Applicants how this particular statement properly discloses or suggests a fastener press fit to a backing plate, as is required by claim 1.

Claims 2-4, 7, 8, 12, 13 and 19 depend from and further limit independent claim 1. For at least the same reasons that claim 1 is not anticipated by Hettes, claims 2-4, 7, 8, 12, 13 and 19 are not disclosed or suggested by Hettes.

Claim 17 requires providing an abrasive article including a fastener press fitted to a backing plate to define a central aperture. Notwithstanding the statements in the Office Action, Applicants submit that Hettes does not properly disclose or suggest providing an abrasive article including a fastener press fitted to a backing plate to define a central aperture. Instead, Hettes describes a fastener 306 integrally molded to the backing plate 304 (e.g., FIG. 10 and supporting description, column 7, lines 43-53). Notwithstanding the Examiner's reliance on Hettes statement that the mount 306 could be separately attached to the backing plate 304 (as discussed in the preceding section), there is nothing in Hettes that properly discloses or suggests the providing an abrasive article including a fastener press fitted to a backing plate to define a central aperture, as is required by claim 17.

Claims 18 depends from and further limits independent claim 17. For at least the same reasons that claim 17 is not anticipated by Hettes, claim 18 is not disclosed or suggested by Hettes.

For the foregoing reasons, Applicants respectfully request that the Examiner reconsider and withdraw the rejections under 35 U.S.C. 102(b) and respectfully request the Examiner issue a Notice of Allowance.

### **35 USC § 103**

#### **Claims 5, 6, 9, 10 and 11**

Claims 5, 6, 9, 10 and 11 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Hettes et al (USPN 5,951,389) in view of Stout et al (USPN 5,316,812). Applicants respectfully request that this rejection be withdrawn.

Claims 5, 6, 9, 10 and 11 depend from and further limit independent claim 1. As discussed in the preceding section, Hettes does not anticipate claim 1 because there is nothing in Hettes that properly discloses or suggests the abrasive article of claim 1 including a fastener press fitted to a backing plate to define a central aperture. Notwithstanding the statements in the Office Action, it is unclear why one of ordinary skill in the art would select and attempt to combine the primary and secondary reference absent the inappropriate use of hindsight analysis. For example, it is unclear why one of ordinary skill in the art having selected the primary reference would select the secondary reference without the use of hindsight analysis. Further, it is not clear from the Office Action where there is proper motivation to modify the primary reference to provide Applicants' claimed invention. Similarly, even assuming their combination is proper, there is nothing in the Hettes and Stout references, taken in combination, that discloses or suggests the abrasive article of claims 5, 6, 9, 10 and 11 including a fastener press fitted to a backing plate to define a central aperture. For at least the given reasons, claims 5, 6, 9, 10 and 11 are not taught or suggested by combination of the cited references.

#### **Claim 14**

Claim 14 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Hettes et al (USPN 5,951,389) in view of Tinnerman (USPN 2,156,002). Claim 14 depends from and further

limits independent claim 1. As discussed in the preceding section, Hettes does not anticipate claim 1 because there is nothing in Hettes that discloses or suggests the abrasive article of claim 1 including a fastener press fitted to a backing plate to define a central aperture. Notwithstanding the statements in the Office Action, it is unclear why one of ordinary skill in the art would select and attempt to combine the primary and secondary reference absent the inappropriate use of hindsight analysis. For example, it is unclear why one of ordinary skill in the art having selected the primary reference would select the secondary reference without the use of hindsight analysis. Further, it is not clear from the Office Action where there is proper motivation to modify the primary reference to provide Applicants' claimed invention. Similarly, even assuming their combination is proper, there is nothing in the Hettes and Tinnerman references, taken in combination, that discloses or suggests the abrasive article of claim 14 including a fastener press fitted to a backing plate to define a central aperture. For at least the same reasons, claim 14 is not taught or suggested by the combination of the cited references. Applicants respectfully request that this rejection be withdrawn.

#### Claim 15

Claim 15 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Hettes et al (USPN 5,951,389) in view of van Buren Jr. (USPN 4,245,438). Claim 15 depends from and further limits independent claim 1. As discussed in the preceding section, Hettes does not anticipate claim 1 because there is nothing in Hettes that discloses or suggests the abrasive article of claim 1 including a fastener press fitted to a backing plate to define a central aperture. Notwithstanding the statements in the Office Action, it is unclear why one of ordinary skill in the art would select and attempt to combine the primary and secondary reference absent the inappropriate use of hindsight analysis. For example, it is unclear why one of ordinary skill in the art having selected the primary reference would select the secondary reference without the use of hindsight analysis. Further, it is not clear from the Office Action where there is proper motivation to modify the primary reference to provide Applicants' claimed invention. Similarly, even assuming their combination is proper, there is nothing in the Hettes and Tinnerman references, taken in combination, that discloses or suggests the abrasive article of claim 15 including a fastener press fitted to a backing plate to define a central aperture. For at least the

given reasons, claim 15 is not taught or suggested by combination of the cited references.

Applicants respectfully request that this rejection be withdrawn.

#### Claim 16

Claim 16 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Block et al (USPN 4,439,907) in view of Stout et al (USPN 5,316,812). During the interview on April 23, 2003, the Examiner stated that the motivation to combine the references was not found within the references themselves, but within the knowledge of one of ordinary skill in the art.

Notwithstanding the statements in the Office Action, it is unclear why one of ordinary skill in the art would select and attempt to combine the primary and secondary reference absent the inappropriate use of hindsight analysis. For example, it is unclear why one of ordinary skill in the art having selected the primary reference would select the secondary reference without the use of hindsight analysis. Further, it is not clear from the Office Action where there is proper motivation to modify the primary reference to provide Applicants' claimed invention. Further, it is unclear from that Office Action what knowledge that one of ordinary skill in the art possessed at the time the invention was made that supports a motivation to combine the cited references. Applicants' invite the Examiner to submit an affidavit showing what facts are common knowledge in the art.

Applicants respectfully submit that the combination of the Block and Stout references is improper. Obviousness requires that there is a suggestion or motivation to modify the teachings of the prior art. Further, it is submitted that the references must suggest the desirability, and thus the obviousness, of making the combination. The present invention is nonobvious because there is no suggestion or motivation in the prior art to combine the Block and Stout references. Applicants submit that teachings of references can be combined *only* if there is some suggestion or incentive to do so. The mere fact that references can be combined does not render the resultant combination obvious unless the prior art suggested the desirability of the combination.

The mere fact that both Block and Stout disclose abrasive articles cannot alone serve as a basis to support their combination for obviousness purposes. In the Office Action, no explicit suggestion is cited in either Block or Stout to support the modification of Block's disc with the teachings of Stout. However, the Examiner states that the apparent motivation to do so would be

“to provide a plate that [will] not substantially deform [or] disintegrate during use.” Significantly, however, Block’s disc is not disclosed as deficient in this regard.

Stout teaches a disc that can withstand “severe stresses.” (Stout, Col. 1, line 34). Block teaches a coated abrasive disc 10 including flexible sheet backing member 12 and abrasive particles 14 attached to the backing member 12 by a suitable adhesive. (Block, Col. 4, lines 4-11). Block teaches that abrasive disc 10 may be attached to a support holder 26 by a single-turn nut and screwed onto the threaded stud of the power tool arbor 24. (Col. 4, lines 47-50; FIG. 9). Block teaches that the coated abrasive disc is “capable of withstanding considerable forces by a workpiece during a powered rotation of the disc against a workpiece.” (Col. 1, lines 8-14). Block emphasizes “reliable resistance of the disc to high forces from a workpiece.” (Col. 1, lines 15-20). In other words, Block has already disclosed a disc that can withstand severe stresses, and thus would not deform or disintegrate during use. Block discloses that it meets this objective on its own and leaves no unmet need or desire in this regard. Therefore, there would be no motivation for one to modify Block or combine it with Stout in the way the Examiner has suggested, or even any apparent need to do so. The mere fact that references can be combined does not render the resultant combination obvious unless the prior art suggests the desirability of the combination.

Further, Block explains the disadvantages of a “center-hole locking system.” (Column 1, line 36 – Column 2, line 6). In such a system, a disc is mounted onto a rotating tool by sliding the hole of the disc onto a threaded tool shaft and screwing a nut with a shoulder onto the shaft, thereby compressing the disc between the shoulder of the nut and the central area of the support pad so that the disc is held by friction against circumferential movement relative to the support pad. (Col. 1, lines 36-47). One disadvantage of this system is that the nut is easily lost; another is that the nut must be set so tightly to frictionally secure the disc that a wrench often must be used to seat and/or unseat the fastener to couple and uncouple the disc from the holder; moreover, use of the disc causes further compression of the disc between the shoulder of the fastener and the central area of the support pad, resulting in a spring-type lock-washer effect, further resisting the unseating of the fastener. (Col. 1, lines 47-68). Block explicitly teaches away from the desirability of a center-hole disc mounting system and provides “a disc which overcomes the above difficulties” and one which “is constructed to provide a positive engagement with a support holder without compressing the disc and converting the disc, as a

practical matter into a lock washer.” (Col. 2, lines 51-55). On the other hand, Stout teaches exactly the type of center-hole locking system decied by Block: “an abrasive disc, which is typically frictionally mounted on the back-up pad; and a rotatable shaft and cap for mounting the abrasive disc and back-up pad by pressure applied to the disc upon screwing the cap into the shaft so that the disc is squeezed against the back-up pad.” (Col. 1, lines 23-32; Figs. 1 and 3). Thus, Block itself points out the undesirability of the combination with Stout. Again, the mere fact that references can be combined does not render the resultant combination obvious unless the prior art suggests the desirability of the combination.

Applicants submit that it is impermissible to use the claimed invention as an instruction manual or “template” to piece together the teachings of the prior art so that the claimed invention is rendered obvious. It is impermissible to use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.

Because there is no suggestion in the prior art for the combination of the Block and Stout references, Applicants respectfully submit that such combination is improper.

Claim 16 has been amended to require that the abrasive material disposed onto the adhesive be selected from a group consisting of coated, non-woven, or bonded abrasives. Applicants’ submit that the cited references do not teach or suggest applying adhesive to a backing plate having a central aperture, wherein the backing plate comprises a thermoplastic binder material and fibrous reinforcing material, and disposing abrasive material onto the adhesive, wherein the abrasive material is selected from a group consisting of coated, non-woven and bonded abrasives. Applicants respectfully request that this rejection be withdrawn.

#### Claim 20

Claim 20 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Block et al (USPN 4,439,907) in view of Stout et al (USPN 5,316,812) as was applied to claim 16, further in view of Hettes et al (USPN 5,951,389). Claim 20 depends from and further limits amended claim 16. Notwithstanding the statements in the Office Action, it is unclear why one of ordinary skill in the art would select and attempt to combine the primary, secondary and tertiary references absent the inappropriate use of hindsight analysis. For example, it is unclear why one of ordinary skill in the art having selected the primary reference would select the secondary and tertiary references without the use of hindsight analysis. Further, it is not clear from the Office Action

where there is proper motivation to modify the primary reference to provide Applicants' claimed invention.

Claim 20 requires that the abrasive material be selected from a group consisting of coated, non-woven or bonded abrasives. Even assuming combination is proper, Applicants' submit that the cited references do not teach or suggest applying adhesive to a backing plate having a central aperture, wherein the backing plate comprises a thermoplastic binder material and fibrous reinforcing material, and disposing abrasive material onto the adhesive, wherein the abrasive material is selected from a group consisting of coated, non-woven and bonded abrasives, as is required by claim 20. Applicants respectfully request that this rejection be withdrawn.

#### Claim 21

Claim 21 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Hettes et al (USPN 5,951,389) in view of Luedeke (USPN 6,095,910). Claim 21 depends from and further limits independent claim 17. As discussed in the preceding section, Hettes does not anticipate claim 17 because there is nothing in Hettes that discloses or suggests the method of claim 17 including providing an abrasive article including a fastener press fitted to a backing plate to define a central aperture. Similarly, even assuming their combination is proper, there is nothing in the Hettes and Tinnerman references, taken in combination, that discloses or suggests the providing the abrasive article of claim 17 including a fastener press fitted to a backing plate to define a central aperture. For at least the same reasons, claim 21 is not taught or suggested by combination of the cited references. Applicants respectfully request that this rejection be withdrawn.

For the foregoing reasons, Applicants respectfully request that the Examiner reconsider and withdraw the rejections and respectfully request the Examiner issue a Notice of Allowance.



**Interview**

The undersigned acknowledges with appreciation the April 23, 2003, telephone interview granted by the Examiner to himself wherein the essence of this response was discussed.

**CONCLUSION**

Claims 1-21 are pending. In light of Applicants' response, Applicants believe the pending claims are in condition for allowance and respectfully request the Examiner issue a Notice of Allowance.

Respectfully submitted,

April 28, 2003  
Date

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